

We claim:

1. A person handling system comprising
 - 5 a) an overhead support component comprising a carriage track
 - b) a carriage component coupled to said carriage track for displacement thereof along said carriage track
 - c) a person lowering and raising winch component attached to said carriage component and
 - 10 d) a carriage displacement component for inducing displacement of said carriage component along said carriage track,
said carriage displacement component comprising an electric motor element and a clutch coupling element
said clutch coupling element being configured for coupling and de-coupling said electric
15 motor element and said carriage component such that
when said electric motor element and said carriage component are coupled and
said electric motor element is energised said carriage component may be urged along said carriage track by said electric motor element and
when said electric motor element and said carriage component are de-coupled
20 said carriage component may be manually displaced along said carriage track.
2. A person handling system as defined in claim 1 further comprising
rechargeable battery means for energising the electric motor element, battery
25 recharge station means and means for automatically bringing the rechargeable battery means into electrical connection with the battery recharge station.
3. A person handling system as defined in claim 1 wherein said clutch coupling
element comprises
a drive shaft able to be rotated in a first direction, said drive shaft being coupled
30 to said electric motor element
a rotatable driving member coupled to said drive shaft such that rotation of the
drive shaft induces rotation of the rotatable driving member

a rotatable driven member

a clutch member for coupling and decoupling said driving member with said driven member and

a means for engaging and disengaging said clutch in response to rotation of said drive shaft

said clutch member being configured to couple said driving member with said driven drive for urging the driven member to rotate in said first direction.

4. A person handling system as defined in claim 3 wherein said drive shaft is able to be rotated in a second direction opposite to said first direction, said clutch component being additionally configured to couple said driving member with said driven member for urging the driven member to rotate in said second direction opposite to said first direction.

5. A winch assembly comprising

a) a person lowering and raising winch component attached to a carriage component, said carriage component being configured for coupling to a carriage track of an overhead support for displacement thereof along said carriage track

and

b) a carriage displacement component for inducing displacement of said carriage component along said carriage track,

said carriage displacement component comprising an electric motor element and a clutch coupling element

said clutch coupling element being configured for coupling and de-coupling said electric motor element and said carriage component such that

when said electric motor element and said carriage component are coupled and said electric motor element is energised said carriage component may be urged along said carriage track by said electric motor element and

when said electric motor element and said carriage component are de-coupled said carriage component may be manually displaced along said carriage track.

6. An assembly as defined in claim 5 further comprising rechargeable battery means for energising the electric motor element.

7. An assembly as defined in claim 5 wherein said clutch coupling element comprises
- 5 a drive shaft able to be rotated in a first direction, said drive shaft being coupled to said electric motor element
- a rotatable driving member coupled to said drive shaft such that rotation of the drive shaft induces rotation of the rotatable driving member
- a rotatable driven member
- 10 a clutch member for coupling and decoupling said driving member with said driven member and
- a means for engaging and disengaging said clutch in response to rotation of said drive shaft

said clutch member being configured to couple said driving member with said driven drive for urging the driven member to rotate in said first direction.

- 15 8. An assembly as defined in claim 7 wherein said drive shaft is able to be rotated in a second direction opposite to said first direction, said clutch component being additionally configured to couple said driving member with said driven member for urging the driven member to rotate in said second direction
- 20 opposite to said first direction

9. A kit comprising
- a) an overhead support component comprising at least a carriage track
- and
- 25 b) an assembly as defined in claim 5.

10. A kit as defined in claim 9 further comprising rechargeable battery means for energising the electric motor element and battery recharge station means.

- 30 11. A person handling system comprising
- a) an overhead support component comprising a carriage track
- b) a carriage component coupled to said carriage track for displacement thereof along said

carriage track

c) a person lowering and raising winch component attached to said carriage component
and

d) a carriage displacement component for inducing displacement of said carriage component
5 along said carriage track,

said carriage displacement component comprising a clutch coupling element and an electric
motor element

said electric motor element being configured for providing driving effort for the displacement
of said carriage component along said carriage track

10 said clutch coupling element being configured for coupling and de-coupling the driving effort
of said electric motor element such that

when the driving effort of said electric motor element is coupled and said
electric motor element is energised said carriage component may be urged along said carriage
track by said electric motor element and

15 when the driving effort of said electric motor element is de-coupled said
carriage component may be manually displaced along said carriage track.

12. A winch assembly comprising

20 a) a person lowering and raising winch component attached to a carriage component, said
carriage component being configured for coupling to a carriage track of an overhead support
for displacement thereof along said carriage track

and

b) a carriage displacement component for inducing displacement of said carriage component
25 along said carriage track,

said carriage displacement component comprising an electric motor element and a clutch
coupling element

said electric motor element being configured for providing driving effort for the displacement
of said carriage component along said carriage track

30 said clutch coupling element being configured for coupling and de-coupling the driving effort
of said electric motor element such that

when the driving effort of said electric motor element is coupled and said

electric motor element is energised said carriage component may be urged along said carriage track by said electric motor element and

when the driving effort of said electric motor element is de-coupled said carriage component may be manually displaced along said carriage track.

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13. A kit comprising

a) an overhead support component comprising at least a carriage track
and

10 b) an assembly as defined in claim 12.

14. A carriage assembly comprising

a) a carriage compo a carriage component, said careing configured for coupling to a carriage track of an overhead support for displacement thereof along said carriage track

15 and

b) a carriage displacement component for inducing displacement of said carriage component along said carriage track,

said carriage displacement component comprising a clutch coupling element and an electric motor element

20 said electric motor element being configured for providing driving effort for the displacement of said carriage component along said carriage track

said clutch coupling element being configured for coupling and de-coupling the driving effort of said electric motor element such that

25 when the driving effort of said electric motor element is coupled and said electric motor element is energised said carriage component may be urged along said carriage track by said electric motor element and

when the driving effort of said electric motor element is de-coupled said carriage component may be manually displaced along said carriage track.

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15. A carriage assembly comprising

a) a carriage component, said carriage component being configured for coupling to a carriage track of an overhead support for displacement thereof along said carriage track

and

b) a carriage displacement component for inducing displacement of said carriage component along said carriage track,

said carriage displacement component comprising an electric motor element and a clutch coupling element

said clutch coupling element being configured for coupling and de-coupling said electric motor element and said carriage component such that

when said electric motor element and said carriage component are coupled and said electric motor element is energised said carriage component may be urged along said carriage track by said electric motor element and

when said electric motor element and said carriage component are de-coupled said carriage component may be manually displaced along said carriage track.

16. A carriage assembly as defined in claim 14 further including means for connecting said carriage component to a second support track disposed transversely to said carriage track.

17. A carriage assembly as defined in claim 15 further including means for connecting said carriage component to a second support track disposed transversely to said carriage track.

18. A person handling system comprising

a) an overhead support component comprising a carriage track and two spaced apart secondary tracks disposed transversely with respect to said carriage track,

b) a first carriage component coupled to said carriage track for displacement thereof along said carriage track

c) second and third carriage components, each of said second and third carriage components being coupled to a respective secondary track for displacement thereof along said respective secondary track, said carriage track being attached to said second and third carriage components

d) a person lowering and raising winch component attached to said first carriage component

e) a first carriage displacement component for inducing displacement of said first carriage component along said carriage track,

f) a second carriage displacement component for inducing displacement of one of said second and third carriage components along said respective secondary carriage track,

each of said carriage displacement components comprising a respective electric motor element and a respective clutch coupling element

said respective clutch coupling element being configured for coupling and de-coupling said respective electric motor element and a respective carriage component such that

when said respective electric motor element and said respective carriage component are coupled and said respective electric motor element is energised said respective carriage component may be urged along a respective track by said respective electric motor element and

when said respective electric motor element and said respective carriage component are de-coupled said respective carriage component may be manually displaced along said respective track.

19. A person handling system as defined in claim 18 further comprising rechargeable battery means for energising each respective electric motor element, battery recharge station means and means for automatically bringing the rechargeable battery means into electrical connection with the battery recharge station.

20. A person handling system comprising

a) an overhead support component comprising a carriage track and two spaced apart secondary tracks disposed transversely with respect to said carriage track,

b) a first carriage component coupled to said carriage track for displacement thereof along said carriage track

c) second and third carriage components, each of said second and third carriage components being coupled to a respective secondary track for displacement thereof along said respective secondary track, said carriage track being attached to said second and third carriage components

d) a person lowering and raising winch component attached to said first carriage component

e) a first carriage displacement component for inducing displacement of said first carriage component along said carriage track,

f) a second carriage displacement component for inducing displacement of one of said second and third carriage components along said respective secondary carriage track,

5 each of said carriage displacement components comprising a respective clutch coupling element and a respective electric motor element

said respective electric motor element being configured for providing driving effort for the displacement of said respective carriage component along a respective track

10 said respective clutch coupling element being configured for coupling and de-coupling the driving effort of said respective electric motor element such that

when the driving effort of said respective electric motor element is coupled and said respective electric motor element is energised said respective carriage component may be urged along said respective track by said respective electric motor element and

15 when the driving effort of said respective electric motor element is de-coupled said respective carriage component may be manually displaced along said carriage track.

21. A person handling system as defined in claim 20 further comprising rechargeable battery means for energising each respective electric motor element, battery recharge station means and means for automatically bringing
20 the rechargeable battery means into electrical connection with the battery recharge station.

22. A person handling system comprising

25 a) an overhead support component comprising a carriage track and two spaced apart secondary tracks disposed transversely with respect to said carriage track,

b) a first carriage component coupled to said carriage track for displacement thereof along said carriage track

30 c) second and third carriage components, each of said second and third carriage components being coupled to a respective secondary track for displacement thereof along said respective secondary track, said carriage track being attached to said second and third carriage components

d) a person lowering and raising winch component attached to said first carriage component

e) a carriage displacement component for inducing displacement of one of said second and third carriage components along said respective secondary carriage track,

said carriage displacement component comprising an electric motor element and a clutch coupling element

said clutch coupling element being configured for coupling and de-coupling said electric motor element and a respective carriage component such that

when said electric motor element and said respective carriage component are coupled and said electric motor element is energised said respective carriage component may be urged along a respective track by said electric motor element and

when said electric motor element and said respective carriage component are de-coupled said respective carriage component may be manually displaced along said respective track.

23. A person handling system as defined in claim 22 further comprising rechargeable battery means for energising said electric motor element, battery recharge station means and means for automatically bringing the rechargeable battery means into electrical connection with the battery recharge station.

24. A person handling system comprising

a) an overhead support component comprising a carriage track and two spaced apart secondary tracks disposed transversely with respect to said carriage track,

b) a first carriage component coupled to said carriage track for displacement thereof along said carriage track

c) second and third carriage components, each of said second and third carriage components being coupled to a respective secondary track for displacement thereof along said respective secondary track, said carriage track being attached to said second and third carriage components

d) a person lowering and raising winch component attached to said first carriage component

e) a carriage displacement component for inducing displacement of one of said second and third carriage components along said respective secondary carriage track,

said carriage displacement component comprising a clutch coupling element and an electric

motor element

said electric motor element being configured for providing driving effort for the displacement of said respective carriage component along a respective track

said respective clutch coupling element being configured for coupling and de-coupling the driving effort of said electric motor element such that

when the driving effort of said electric motor element is coupled and said electric motor element is energised said respective carriage component may be urged along said respective track by said electric motor element and

when the driving effort of said electric motor element is de-coupled said respective carriage component may be manually displaced along said carriage track.

25. A person handling system as defined in claim 24 further comprising rechargeable battery means for energising said electric motor element, battery recharge station means and means for automatically bringing the rechargeable battery means into electrical connection with the battery recharge station.